IN THE CLAIMS:

Please amend the claims as indicated below.

Claims 1-29 (withdrawn).

30. (original) A method of fabricating a composite electrolyte for use in an electrochemical fuel cell, comprising:

(i) applying onto a surface of a substrate a viscous liquid composition of (a) an inorganic cation exchange material, (b) silica-based material, (c) a polymer-based material, and (d) a solvent-dispersant;

(ii) spreading the viscous liquid composition to form a uniform thickness layer on the substrate; and

(iii) allowing the solvent to evaporate from the viscous liquid composition to yield the composite electrolyte,

wherein the inorganic cation exchange material comprises about 0.1 wt% to about 99 wt% of the composite electrolyte.

31. (original) The method of claim 30, wherein the silica-based material comprises about 0.1 wt% to about 70 wt%, and the polymer-based material comprises about 0.1 wt% to 99.9 wt% of the composite electrolyte.

32. (original) The method of claim 30 wherein step (ii) includes drawing the viscous liquid composition through a doctor blade assembly.

33. (original) The method of claim 30 wherein step (iii) includes heating the viscous liquid composition.

34. (original) The method of claim 30 wherein the inorganic cation exchange material comprises about 0.1 wt% to about 30 wt%, the silica-based material comprises about 0.1 wt% to about 15 wt%, and the polymer-based material comprises about 40 wt% to 99 wt% of the composite electrolyte.

35. (currently amended) The method of claim [19] 30 wherein the inorganic cation exchange material is selected from the group consisting of clay, zeolite, hydrous oxide, inorganic and salt.

36. (original) The method of claim 35 wherein the clay includes an aluminosilicate-based exchange material selected from the group consisting of montmorillonite, kaolinite, vermiculite, smectite, hectorite, mica, bentonite, nontronite, beidellite, volkonskoite, saponite, magadite, kenyaite, zeolite, alumina, and rutile.

37. (original) The method of claim 35, wherein the clay is modified to make it more compatible with organic matrices, a clay modification including exfoliation which helps to separate platelets of inorganic substance.

38. (original) The method of claim 35, wherein the clay includes a modified montmorillonite consisting of montmorillonite treated with a modifier material selected from a group consisting of aminododecanoic acid, trimethyl stearate ammonium, octadecylamine, and methyl dihydroxy hydrogenated tallow ammonium.

39. (original) The method of claim 30 wherein the polymer-based material has a linear, branched, or netted morphology.

40. (original) The method of claim 30 wherein the polymer-based material includes one of acrylonitrile/butadiene/stryene rubber (ABS), styrene butadiene/acrylate/acetate polymer blends, epoxides, polypropylene, polycarbonate, polystyrene, polyethylene, polyaryl ethers, and polysulfones.

41. (original) The method of claim 30 wherein the solvent-dispersant comprises water, N-methyl pyrrolidinone, dimethyl sulfoxide, dimethyl acidimide, and

dimethylformamide.

42. (original) The method of claim 30 wherein the inorganic cation exchange material, the silica-based material and the polymer-based material comprise 90 wt % or more of the solids content of the composite electrolyte.

43. (original) The method of claim 30 wherein the composite electrolyte when measured in the substantially dried state consists essentially of the inorganic cation exchange material, the silica-based material and the polymer-based material.

44. (currently amended) The method of claim [19] 30 wherein the composite electrolyte has a proton conductivity of about 0.05 S/cm or higher.

Claims 45-50 (withdrawn).

Respectfully submitted,

DECHERT LLP

Dated: October 6, 2004

Harmohinder (Ben) Bedi
Reg. No. 39,904

DECHERT LLP
Customer No. 37509
P.O. Box 10004
Palo Alto, CA 94303-0961
Tel: 650. 813.4800
Fax: 650.813.4848

CERTIFICATE OF MAILING (37 CFR 1.8(a))

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited on October 6, 2004, with the U.S. Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA, 22313-1450.

Date: October 6, 2004

Yolette Yturralde-Owen